

Appl. No. : 10/741,537
Filed : December 19, 2003

REMARKS

This is in response to the Office Action mailed September 1, 2006. Claims 15-16 and 32-41 remain pending.

Applicant has submitted herewith the Declaration of Bruce Spangrud. By this Declaration, Applicant notes that various burner designs are known, and that these burner designs all suffer from various problems. Such problematic prior art designs include that disclosed in German reference DE 297 20 168, cited by the Examiner.

Claim Rejections Over German Patent No. DE 297 20 168 U1

The Examiner rejected Claims 15, 32, 34, 38 and 39 under 35 U.S.C. 102(b) as allegedly anticipated by the disclosure of German Patent No. DE 297 20 168 U1 ("DE '168").

Applicant submits that the invention defined by the current claims is neither anticipated by, or obvious in view of, the DE '168 reference for the following reasons.

The DE '168 reference discloses (as best understood by Applicant, in light of the fact the reference is in German), an invention directed at linking multiple burners to one another to simplify ignition of the burners. The DE '168 reference discloses (referring to Figure 2), a means for commonly igniting a plurality of standard "U"-shaped burners. In particular, a gas-delivering ignition pipe (57) links a plurality of "U"-shaped burners (46,47,48) together. In this configuration, gas flows from one burner to another via the ignition pipe (57). This configuration has the advantage that when the first burner (46) is ignited, the burning gas will travel along the ignition pipe to the other burners (47,48), igniting them as well. This burner design, however, suffers from the same problems as the "U"-shaped prior art burner design described above. In particular, gas is delivered to the "U" portion

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of each burner, such that there is high gas pressure and high heat generation at the “U” portion of the burner, and low gas pressure and low heat generation at the free ends of the legs of the burners. See Declaration of Bruce Spangrud.

The DE ‘168 reference also discloses a means for commonly igniting “straight” burners. This configuration is illustrated in Figure 1. In this case, each burner (10,11,12) comprises a pair of straight leg burners. These burners (10,11,12) are linked by an ignition and burner pipe (39). This ignition pipe (39) includes gas holes (43). This configuration is advantageous because it permits all of the burners to be ignited using a single ignitor (36) (the burning flame travels from the first burner (10) to the ignition pipe (39) and then to the other burners (11,12)). In addition, the ignition pipe (39) provides additional heat along the back of the grill. However, because of the linking of the burners (10,11,12) via the ignition and burner pipe (39), gas provided to the burners naturally flows towards the ignition and burner pipe (39) and the ends (63) of the burners (10,11,12) at the ignition pipe (39). Thus, this burner design suffers from very uneven heat generation: there is low gas pressure and low heat generation at the front or free ends of the burners, and high gas pressure and high heat generation at the opposing ends of the burners and along the ignition pipe (39). See Declaration of Bruce Spangrud.

While gas is provided to the burners illustrated in Figure 1 via “T” shaped delivery pipes (17), this is clearly done to simplify delivery of gas to each of the straight burner elements (otherwise, gas would have to be provided to each burner leg by multiple separate lines), and not for the purpose of attempting to achieve even gas pressure and even heating. This is clearly true because even gas pressure and even heating are not the goal of the design, but rather common ignition is the goal of the design (by which this common ignition design actually promotes uneven gas pressure and uneven

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heating). In other words, it there is no suggestion to apply the disclosure of a “T” shaped supply to the “U” shaped burner or the prior art, including as illustrated in Figure 2 of DE ‘168, because the “T” shaped supply lines are not being used to provide even gas supply, but to simplify gas delivery, which is not a problem with the “U” shaped burners because the legs of the “U” shaped burner are connected at the “U.”

In sum, the DE ‘168 reference does not disclose: (1) a “U” shaped burner where gas is delivered to the legs of the burner; and (2) a “U” shaped burner where gas is delivered solely by arms leading to the legs thereof.

Relative to the present application, independent Claim 15 is directed to burner including a “U” shaped burner conduit having first and second spaced legs, a gas delivery conduit and first and second arms extending between the delivery conduit and the legs, the first and second arms defining closed gas delivery paths, whereby gas provided to an inlet end of the delivery conduit is delivered to the burner conduit solely at the first and second legs via the first and second arms.

Similarly, independent Claim 32 is directed to a burner conduit having a first leg and a second leg and a curved connecting portion and comprising a wall defining an interior passage, and a gas delivery conduit comprising a central section having a first end comprising a gas inlet and first and second arms extending outwardly from the central section, the first arm connected to the first leg of the burner conduit and defining a fluid path from the central section to the interior passage through the first leg, and the second leg connected to the second leg of the burner conduit and defining a fluid path from the central section to the interior passage through the second leg, the central section defining a gas flow passage from the inlet to the first and second arms and the first and second arms defining closed gas flow passages therethrough to the first and second legs of the burner conduit, whereby gas

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is solely delivered to the burner conduit by delivering gas to the inlet of the gas delivery conduit and delivering that gas through the first and second arms of the gas delivery conduit to the first and second legs of the burner conduit.

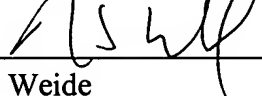
These claimed configurations are contrary to DE '168 where the burners are "bridged" by way of the common ignition pipe (39/57). As clearly indicated in the application, the claimed configuration is advantageous over configurations such as disclosed in DE '168, in that gas is evenly distributed to and along the lengths of, the legs of a single "U"-shaped burner, thus resulting in even heat distribution for that single burner (i.e. elimination of hot spots, as would result in a configuration such as DE '168 where the gas is delivered across a plurality of burner pipes). Applicant asserts that Claims 16 and 33-41 are allowable for at least the reason they depend from an allowable independent claim. In addition, Applicant asserts that the prior art, including DE '168, does not teach or suggest various limitations of those claims.

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Summary

In view of the above remarks, it is respectfully submitted that this application is in condition for allowance. Accordingly, the Examiner is respectfully requested to pass this case for issue. If any matters remain outstanding regarding further prosecution of this application, the Examiner is invited to contact the undersigned by telephone.

Respectfully submitted,

Dated: November 30, 2006 By: 

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